Optional: Prover asks Verifier to transmit AoD+AoA packets

Verifier transmits AoD+AoA packets using two antenna arrays by switching elements mixed using both antenna arrays and unknown switching pattern

Prover receives the AoD+AoA packets using its antenna array and send the IQ data back to the Verifier

Verifier makes AoD+AoA analysis using the IQ data and computes angles α_{P_1} θ_1 and θ_2 and then distances d_1 and d_2 as:

$$d_1 = \frac{a\cos(\theta_2)}{\sin(\theta_1 - \theta_2)} \qquad d_2 = \frac{a\cos(\theta_1)}{\sin(\theta_1 - \theta_2)}$$

After that the distances are verified using law of cosines:

$$a^2 = d_1^2 + d_2^2 - 2d_1d_2cos\alpha_P$$

Provided that the distances are found reliable the verifier takes action based on detected distances